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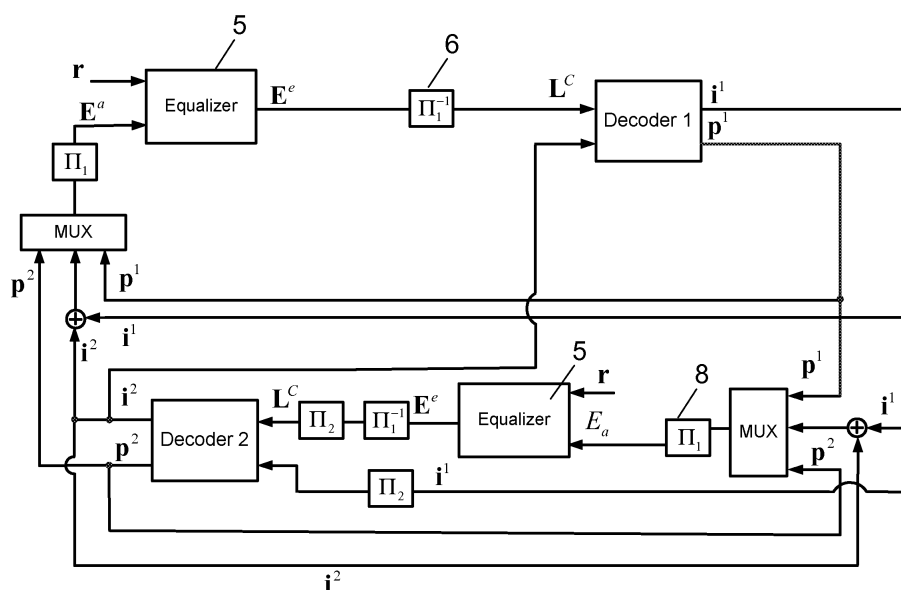
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(54) **Process and arrangement for turbo equalization with turbo decoding of signals**

(57) The present invention is directed to a Process and arrangement for turbo equalization with turbo decoding of signals. In order to provide a low complexity schedule for turbo equalization with turbo decoding the process according to the present invention is **characterized in that** one equalization step is performed at each turbo equalizer iteration and that one decoder step is per-

formed at each turbo equalizer iteration, whereby at each turbo equalizer iteration only a part of the turbo decoder step is performed. An arrangement according to the present invention comprises one equalizer unit and further comprising a single decoder unit for performing only a part of a turbo decoding iteration per turbo equalizer iteration, said decoder unit being interposed between the output and an input of the equalizer unit.



**Fig. 3**



## EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	LEE F K H ET AL: "Parallel-trellis turbo equalizers for sparse-coded transmission over sparse multipath channels", ICC 2003. 2003 IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS. ANCHORAGE, AK, MAY 11 - 15, 2003, IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS, NEW YORK, NY : IEEE, US, vol. VOL. 1 OF 5, 11 May 2003 (2003-05-11), pages 2943-2947, XP010642984, ISBN: 0-7803-7802-4	1,2,4,5,7-10	INV. H04L25/03 H04L1/00
A	Section IV; * abstract; figure 3 *	3,6,11,12	
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A	* abstract; figures 6,7 * ----- -/--	6,11,12	TECHNICAL FIELDS SEARCHED (IPC) H04L
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 18 April 2011	Examiner Miclea, Sorin
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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DOCUMENTS CONSIDERED TO BE RELEVANT			
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X	OTNES R ET AL: "On iterative equalization, estimation, and decoding", ICC 2003. 2003 IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS. ANCHORAGE, AK, MAY 11 - 15, 2003, IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS, NEW YORK, NY : IEEE, US, vol. VOL. 1 OF 5, 11 May 2003 (2003-05-11), pages 2958-2962, XP010642987, ISBN: 0-7803-7802-4	1,2,4,5,7-10	
A	Sections I, II (last paragraph), III (last paragraph); * abstract; figure 1 *	3,6,11,12	
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A	Section III; * abstract; figure 7 *	3,6,11,12	
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 18 April 2011	Examiner Miclea, Sorin
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons &amp; : member of the same patent family, corresponding document</p>			

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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A	* abstract; figure 1 * -----	4,5,7-10	TECHNICAL FIELDS SEARCHED (IPC)
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